

WHAT IS CLAIMED IS:

1. A method for directing data packets to network applications, the method comprising:
receiving a first data packet via a first network interface, the first data packet containing a
first data packet service address;
identifying a first network application of a plurality of network applications based at least in
part on the first network interface and the first data packet service address, the plurality of
network applications including a second network application, the first network
application being different from the second network application; and
sending at least a portion of the first data packet to the first network application.
2. The method of claim 1, wherein sending at least a portion of the first data packet to the
first network application includes sending at least a portion of the first data packet to the first
network application via a second network interface, the second network interface being different
from the first network interface.
3. The method of claim 1, the method further comprising:
receiving a second data packet via the first network interface, the second data packet
containing a second data packet service address;
identifying the second network application of the plurality of network applications based at
least in part on the first network interface and the second data packet service address; and
sending at least a portion of the second data packet to the second network application.
4. The method of claim 1, wherein the first network application is a first version of a
particular network application and the second network application is a second version of a
particular network application.

5. The method of claim 4, wherein the first version of the particular network application is from a first vendor, the second version of the particular network application is from a second vendor, and the first vendor is different from the second vendor.

6. The method of claim 4, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application.

7. The method of claim 1, wherein:

the first data packet includes a first data packet service port identifier; and

identifying a first network application of a plurality of network applications based at least in

part on the first network interface and the first data packet service address includes

identifying a first network application of a plurality of network applications based at least

in part on the first network interface, the first data packet service address, and the first

data packet service port identifier.

8. The method of claim 1, wherein:

the first network application is selected from the group consisting of an intrusion detection

application, a virus detection application, a firewall application, a web switch, a network

security application, and a load balancing application; and

the second network application is a different network application selected from the group

consisting of an intrusion detection application, a virus detection application, a load

balancing application, a virtual private network application, a firewall application, a web

switch, a network security application, a proxy application, and a database application.

9. The method of claim 1, the method further comprising:

receiving a first data packet via a first network interface includes determining a first data packet received network interface identifier based at least in part on receiving the first data packet via the first network interface; and

identifying a first network application of a plurality of network applications based at least in part on the first network interface includes identifying the first network application of the plurality of network applications based at least in part on the first data packet received network interface identifier.

10. A method for directing units of data to network applications, the method comprising:

receiving a first unit of data, the first unit of data including a first service address and a first service port identifier;

identifying a first network application of a plurality of network applications based at least in part on the first service address and the first service port identifier, the plurality of network applications including a second network application, the first network application being different from the second network application; and

sending at least a portion of the first unit of data to the first network application.

11. The method of claim 10, wherein:

receiving a first unit of data includes receiving the first unit of data via a first network interface; and

identifying a first network application of a plurality of network applications based at least in part on the first service address and the first service port identifier includes identifying the first network application of the plurality of network applications based at least in part on the first service address, the first service port identifier, and the first network interface.

12. The method of claim 10, wherein:

receiving a first unit of data includes

receiving the first unit of data via a first network interface, and

determining a first unit of data received network interface identifier based at least

in part on receiving the first unit of data via the first network interface; and

identifying a first network application of a plurality of network applications based at least in

part on the first service address and the first service port identifier includes identifying

the first network application of the plurality of network applications based at least in part

on the first service address, the first service port identifier, and the first unit of data

received network interface identifier.

13. The method of claim 10, wherein the first network application is a first implementation of a particular network application and the second network application is a second implementation of a particular network application.

14. The method of claim 13, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.

15. The method of claim 10, wherein identifying a first network application of a plurality of network applications based at least in part on the first service address and the first service port identifier includes:

accessing a database, the database including a plurality of records, each of at least a subset of the plurality of records including

a service address field to store a service address, and
a plurality of packet direction entries, each of at least a subset of the plurality of
packet direction entries corresponding to a network application of the plurality
of network applications, each of at least the subset of the plurality of packet
direction entries containing a service port identifier field to store a service port
identifier;

identifying a record of the at least a subset of the plurality of records based at least in part on
the first service address; and

identifying a packet direction entry of the identified record based at least in part on the first
service port identifier, the identified packet direction entry corresponding to the first
network application.

16. The method of claim 15, wherein:

identifying a record of the at least a subset of the plurality of records based at least in part on
the first service address includes identifying a record containing a service address
corresponding to the first service address; and

identifying a packet direction entry of the identified record based at least in part on the first
service port identifier includes identifying a packet direction entry containing a service
port identifier corresponding to the first service port identifier.

17. The method of claim 15, wherein:

receiving a first unit of data includes

receiving the first unit of data via a first network interface, and

determining a first unit of data received via network interface identifier based at least in part on receiving the first unit of data via the first network interface; and

identifying a first network application of a plurality of network applications based at least in part on the first service address and the first service port identifier includes identifying the first network application based at least in part on the first service address, the first service port identifier, and the first unit of data received via network interface identifier.

18. The method of claim 17, wherein identifying the first network application based at least in part on the first service address, the first service port identifier, and the first unit of data received via network interface identifier includes:

each of at least the subset of the plurality of packet direction entries containing a unit of data received via network interface identifier field to store a unit of data received via network interface identifier; and

identifying the packet direction entry of the identified record based at least in part on the first unit of data received via interface identifier, the identified packet direction entry corresponding to the first network application.

19. The method of claim 18, wherein each of at least the subset of the plurality of packet direction entries includes a send via network interface field to store a send via network interface identifier.

20. The method of claim 18, wherein each of at least the subset of the plurality of packet direction entries includes a source address field to store a source address.

21. The method of claim 18, wherein each of at least the subset of the plurality of packet direction entries includes a destination logical address field to store a destination logical address.

22. The method of claim 18, wherein each of at least the subset of the plurality of packet direction entries includes a network application send address field to store a network application send address.

23. The method of claim 22, wherein the network application send address field to store a network application send address is a network application physical address field to store a network application physical address.

24. The method of claim 23, wherein the network application physical address field to store a network application physical address is a network application media access controller address field to store a media access controller address.

25. The method of claim 22, wherein the network application send address field to store a network application send address is a network application send logical address field to store a network application send logical address.

26. The method of claim 10, the method further comprising:

receiving a second unit of data, the second unit of data including a second service address

and a second service port identifier;

identifying the second network application of a plurality of network applications based at

least in part on the second service address and the second service port identifier; and

sending at least a portion of the second unit of data to the second network application.

27. The method of claim 26, wherein:

sending at least a portion of the first unit of data to the first network application includes
sending at least a portion of the first unit of data to the first network application via a
second network interface, the second network interface being different from the first
network interface; and

sending at least a portion of the second unit of data to the second network application
includes sending at least a portion of the second unit of data to the second network
application via the second network interface.

28. A system for directing a data packet to a network application, the system comprising:
a first network interface to receive a data packet, the data packet including a data packet
service address;
packet direction logic, the packet direction logic coupled to the first network interface, the
packet direction logic including a plurality of service definition records, each of at least a
subset of the plurality of service definition records including
a service address field to store a service address,
a plurality of packet direction entries, each of at least a subset of the plurality of
packet direction entries corresponding to a network application, the plurality
of packet direction entries including a first packet direction entry and a second
packet direction entry, the first packet direction entry corresponding to a first
network application, the second packet direction entry corresponding to a
second network application, the first network application being different from
the second network application, and

each of at least the subset of the plurality of packet direction entries including a received via network interface field to store a received via network interface identifier; and

a second network interface to send at least a portion of the data packet to the first network application, the second network interface coupled to the packet direction logic, the second network interface being different from the first network interface.

29. The system of claim 28, wherein the first network application is a first version of a particular network application and the second network application is a second version of a particular network application.

30. The system of claim 29, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application.

31. The system of claim 28, wherein:

the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application; and

the second network application is a different network application selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.

32. The system of claim 28, wherein:

the data packet includes a data packet service port identifier; and

each of at least the subset of the plurality of packet direction entries includes a service port identifier field to store a service port identifier.

33. The system of claim 28, wherein each of at least the subset of the plurality of packet direction entries includes a send via network interface field to store a send via network interface identifier.

34. The system of claim 28, wherein each of at least the subset of the plurality of packet direction entries includes a source address field to store a source address.

35. The system of claim 28, wherein each of at least the subset of the plurality of packet direction entries includes a destination logical address field to store a destination logical address.

36. The system of claim 28, wherein each of at least the subset of the plurality of packet direction entries includes a network application send address field to store a network application send address.

37. The system of claim 36, wherein the network application send address field to store a network application send address is a network application physical address field to store a network application physical address.

38. The system of claim 37, wherein the network application physical address field to store a network application physical address is a network application media access controller address field to store a media access controller address.

39. The system of claim 36, wherein the network application send address field to store a network application send address is a network application send logical address field to store a network application send logical address.

40. The system of claim 28, wherein:

the data packet contains a data packet service port identifier; and

each of at least a subset of the plurality of packet direction entries includes

a service port identifier field to store a service port identifier,

a send via network interface field to store a send via network interface identifier,

a source address field to store a source address,

a destination logical address field to store a destination logical address, and

a network application send address field to store a network application send address.

41. The system of claim 28, wherein the data packet uses one or more protocols from one of a TCP/IP network protocol suite and a UDP/IP network protocol suite.

42. The system of claim 41, wherein the one or more protocols includes an IPv4 network protocol.

43. The system of claim 41, wherein the one or more protocols includes an IPv6 network protocol.

44. The system of claim 28, wherein the data packet uses one or more of a layer 2 protocol, a layer 3 protocol, and a layer 4 protocol

45. The system of claim 44, wherein the layer 2 protocol is selected from the group consisting of ATM and frame relay

46. The system of claim 44, wherein the layer 3 protocol is MPLS.

47. The system of claim 28, wherein the packet direction logic lacks information that supports stateful processing.

48. The system of claim 28, wherein the packet direction logic includes information that supports stateful processing.

49. The system of claim 28, wherein the packet direction logic consists essentially of information that supports stateless processing.

50. A system for directing a data packet, the system comprising:

means for receiving the data packet, the data packet including a data packet service address and a data packet service port identifier;

means for identifying a first network application of a plurality of network applications based at least in part on the data packet service address and the data packet service port identifier, the plurality of network applications including at least the first network application and a second network application, the first network application being different from the second network application; and

means for sending at least a portion of the data packet to the first network application.

51. The system of claim 50, wherein:

the means for receiving a data packet includes means for receiving a data packet via a first network interface;

the means for identifying a first network application of a plurality of network applications based at least in part on the data packet service address and the data packet service port identifier includes means for identifying the first network application of the plurality of network applications based at least in part on the data packet service address, the data packet service port identifier, and receiving the data packet via the first network interface; and

the means for sending at least a portion of the data packet to the first network application includes means for sending at least a portion of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface.

52. The system of claim 50, wherein:

the means for receiving a data packet includes

means for receiving the data packet via a first network interface, and

means for determining a data packet received network interface identifier based at

least in part on receiving the data packet via the first network interface; and

the means for identifying a first network application of a plurality of network applications based at least in part on the data packet service address and the data packet service port identifier includes means for identifying the first network application of the plurality of network applications based at least in part on the data packet service address, the data packet service port identifier, and the data packet received network interface identifier.

53. The system of claim 50, wherein the first network application is a first implementation of a particular network application and the second network application is a second implementation of a particular network application.

54. The system of claim 53, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.

55. A process for directing a data packet, the process comprising:

a step for receiving the data packet, the data packet including a data packet service address and a data packet service port identifier;

a step for identifying a first network application of a plurality of network applications based at least in part on the data packet service address and the data packet service port identifier, the plurality of network applications including at least the first network application and a second network application, the first network application being different from the second network application; and

a step for sending at least a portion of the data packet to the first network application.

56. The process of claim 55, wherein:

the step for receiving a data packet includes a step for receiving the data packet via a first network interface;

the step for identifying a first network application of a plurality of network applications based at least in part on the data packet service address and the data packet service port identifier includes a step for identifying the first network application of the plurality of network applications based at least in part on the data packet service address, the data packet service port identifier, and receiving the data packet via the first network interface; and

the step for sending at least a portion of the data packet to the first network application includes a step for sending at least a portion of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface.

57. The process of claim 55, wherein:

the step for receiving a data packet includes

a step for receiving the data packet via a first network interface, and

a step for determining a data packet received network interface identifier based at least in part on receiving the data packet via the first network interface; and

the step for identifying a first network application of a plurality of network applications

based at least in part on the data packet service address and the data packet service port

identifier includes a step for identifying the first network application of the plurality of network applications based at least in part on the data packet service address, the data packet service port identifier, and the data packet received network interface identifier.

58. The process of claim 55, wherein the first network application is a first version of a particular network application and the second network application is a second version of a particular network application.

59. The process of claim 58, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.

60. A computer-readable medium storing a plurality of instructions to be executed by a processor for directing a packet, the plurality of instructions comprising instructions to:

- receive a data packet, the data packet including a data packet service address and a data packet service port identifier;
- identify a first network application of a plurality of network applications based at least in part on the data packet service address and the data packet service port identifier, the plurality of network applications including at least the first network application and a second network application, the first network application being different from the second network application; and
- send at least a portion of the data packet to the first network application.

61. The computer-readable medium of claim 60, wherein:

- the instructions to receive a data packet include instructions to receive the data packet via a first network interface;
- the instructions to identify a first network application of a plurality of network applications based at least in part on the data packet service address and the data packet service port identifier include instructions to identify the first network application of the plurality of network applications based at least in part on the data packet service address, the data packet service port identifier, and receiving the data packet via the first network interface; and
- the instructions to send at least a portion of the data packet to the first network application include instructions to send at least a portion of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface.

62. The computer-readable medium of claim 60, wherein:

the instructions to receive a data packet include instructions to

receive the data packet via a first network interface, and

determine a data packet received network interface identifier based at least in part

on receiving the data packet via the first network interface; and

the instructions to identify a first network application of a plurality of network applications

based at least in part on the data packet service address and the data packet service port

identifier include instructions to identify the first network application of the plurality of

network applications based at least in part on the data packet service address, the data

packet service port identifier, and the data packet received network interface identifier.

63. The computer-readable medium of claim 60, wherein the first network application is a first implementation of a particular network application and the second network application is a second implementation of a particular network application.

64. The computer-readable medium of claim 63, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.